(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 8 January 2004 (08.01.2004)

PCT

(10) International Publication Number WO 2004/003233 A1

(51) International Patent Classification7: C07H 21/04

C12Q 1/68,

(21) International Application Number:

PCT/US2003/020504

(22) International Filing Date: 27 June 2003 (27.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/392,629

28 June 2002 (28.06.2002)

(71) Applicant (for all designated States except US): ROSETTA INPHARMACTIS LLC [US/US]; 12040 115th Avenue N.E., Kirkland, WA 98034 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MARTON, Matthew [US/US]; 9802 Marmount Dr. NW, Seattle, WA 98117 (US). MEYER, Michael [US/US]; 7026 18th Ave NE, Seattle, WA 98115 (US). JONES, Allan [US/US]: 11410 NE 124th Street #454, Kirkland, WA 98034 (US).

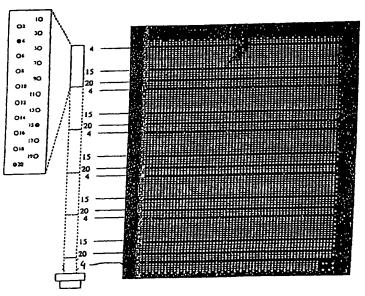
- (74) Agents: ANTLER, Adriane, M. et al.; Pennie & Edmonds LLP, 1155 Avenue of the Americas, New York, NY 10036 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

[Continued on next page]

(54) Title: METHODS TO ASSESS QUALITY OF MICROARRAYS



(57) Abstract: The present invention relates to methods and compositions for assessing the quality of microarrays. In particular, the invention relates to the use of quality control probes that are synthesized on the microarray monomer by monomer in a step-by-step synthesis. By assessing the degree of signal from the quality control probes and determining their deviation from expected signal intensities, the quality of microarray synthesis can be ascertained. The invention further relates to a method of detecting defects occurring during storage or processing of the microarray. The invention further relates to a method of using a computer to identify microarrays that have had a defect or defects during synthesis, storage, or processing.